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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/797,996

03/11/2004

Lixiao Wang

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6285

490 7590 02/01/2007
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EXAMINER

DANIELS, MATTHEW J

ART UNIT

PAPER NUMBER

1732

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
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3 MONTHS

02/01/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/797,996

Applicant(s)

WANG ET AL.

Examiner

Matthew J. Daniels

Art Unit

1732

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 March 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 14-26 is/are pending in the application.
- 4a) Of the above claim(s) 14-17 and 19-22 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 18 and 23-26 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 3/11/04, 8/27/04.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Election/Restrictions

1. This application contains claims directed to the following patentably distinct species:

Species I: Coating the inside and outside of the tube (Claim 14)

Species II: inserting a first tube into the second tube, inserting the second tube into the third tube (Claims 18 and 23)

Species III: Coextruding first, second, and third materials (Claim 19)

2. The species are independent or distinct because (a) the species are mutually exclusive and could not be used together (coextruding, coating, and inserting are mutually exclusive) and (b) there is no disclosed relationship between the species and they are unconnected in design, operation, and effect.

3. Applicant is required under 35 U.S.C. 121 to elect a single disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable. Currently, no claim is generic.

4. Applicant is advised that a reply to this requirement must include an identification of the species that is elected consonant with this requirement, and a listing of all claims readable thereon, including any claims subsequently added. An argument that a claim is allowable or that all claims are generic is considered nonresponsive unless accompanied by an election.

5. Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which depend from or otherwise require all the limitations of an allowable generic claim as provided by 37 CFR 1.141. If claims are added after the election, applicant must indicate which are readable upon the elected species. MPEP § 809.02(a).

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6. Because these inventions are independent or distinct for the reasons given above and there would be a serious burden on the examiner if restriction is not required because the inventions have acquired a separate status in the art due to their recognized divergent subject matter, and because the inventions require a different field of search (see MPEP § 808.02), restriction for examination purposes as indicated is proper.

7. The election of an invention or species may be made with or without traverse. To reserve a right to petition, the election must be made with traverse. If the reply does not distinctly and specifically point out supposed errors in the restriction requirement, the election shall be treated as an election without traverse.

8. Should applicant traverse on the ground that the inventions or species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the inventions or species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C.103(a) of the other invention.

9. During a telephone message from Lisa Lindquist on 15 January 2007 a provisional election was made with traverse to prosecute Species II, Claims 18 and 23-26. Affirmation of this election must be made by applicant in replying to this Office action. Claims 14-17 and 19-22 withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

10. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the

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application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Claim Objections

11. **Claims 18 and 23** are objected to because of the following informalities: Both claims recited that they are dependent on deleted Claim 1. For examination both claims were assumed to be independent. Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

12. **Claim 25** is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. A claim where a variable is “predetermined” is indefinite where it means only that the variable is determined ahead of time.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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13. **Claims 18 and 23-26** are rejected under 35 U.S.C. 103(a) as being unpatentable over Crocker (USPN 5843116) in view of Gore (USPN 3953566). **As to Claim 18**, Crocker teaches a method of forming the balloon comprising the steps of:

- i) providing first (Fig. 3, item 36), second (Fig. 3, items 40 and 44) and third tubes (Fig. 3, item 38);
- ii) inserting the first tube into the second tube (Fig. 3, items 40 and 44);
- iii) inserting the second tube into the third tube (Fig. 3);
- iv) inserting the first, second and third tubes into a balloon mold (7:35-50);
- v) expanding the first, second and third tubes at a desired temperature so as to form a balloon (7:35-50, particularly 7:37-40).

Crocker appears to be silent to the second tube formed of a tube made of a material selected from the group consisting of fluoropolymers and high density polyethylene. However, Crocker clearly suggests cross-linked polyethylene (5:35-39), and it is the Examiner's position that crosslinking would produce a polyethylene having a "high density", as claimed.

However, in the alternative, Gore teaches a PTFE (a fluoropolymer) tubular product (14:17-20) having a dense structure and extremely high strength which would have been suitable for use in Crocker's method as the expansion limiting bands (Crocker, 5:28-30). It would have been prima facie obvious to one of ordinary skill in the art at the time of the invention to incorporate the method of Gore into that of Crocker because:

- a) Crocker provides a lamination process (7:8-62), and Gore suggests that the PTFE material is useful in laminated structures (1:39-40).

b) The extremely high strength product of Gore (1:30) would be desirable to Crocker in order to provide the suggested structural integrity and limited expansion of the balloon (5:46-52).

As to Claim 23, Crocker teaches a method of forming a balloon comprising the steps of:

- i) providing first (Fig. 3, item 36), second (Fig. 3, Items 40 and 44) and third (Fig. 3, Item 38) tubes,
- ii) inserting the first tube into the second tube (Fig. 3);
- iii) inserting the second tube into the third tube (Fig. 3);
- iv) laminating the first tube and the second tube together (7:8-62);
- v) laminating the second tube and third tube together so as to form at least a three tube laminate (7:8-62).

Crocker is silent to the second tube formed of expanded PTFE. However, Gore teaches a PTFE (a fluoropolymer) tubular product (14:17-20)) having a dense structure and extremely high strength which would have been suitable for use in Crocker's method as the expansion limiting bands (Crocker, 5:28-30). It would have been prima facie obvious to one of ordinary skill in the art at the time of the invention to incorporate the method of Gore into that of Crocker because:

a) Crocker provides a lamination process (7:8-62), and Gore suggests that the PTFE material is useful in laminated structures (1:39-40).

b) The extremely high strength product of Gore (1:30) would be desirable to Crocker in order to provide the suggested structural integrity and limited expansion of the balloon (5:46-52).

As to Claim 24, Crocker provides first and third tubes laminated together at least in part (7:40-50). **As to Claim 25**, in the invention of Crocker the temperature was predetermined (7:40-50). **As to Claim 26**, Crocker teaches that while items 36, 40, and 38 may be bonded

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together (7:8-11), it is possible to attach the components without adhesively bonding or securing the two balloons together or in a configuration where the expansion limiting bands are merely sandwiched (7:23-25, 7:50-65) between the balloons. In either embodiment, subsequent expansion of the balloon would cause delamination of the first and second tubes and the second and third tubes upon blowing the balloon either by expanding the adhesively bonded areas or separating the unbonded areas.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Matthew J. Daniels whose telephone number is (571) 272-2450. The examiner can normally be reached on Monday - Friday, 8:00 am - 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christina Johnson can be reached on (571) 272-1176. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

MJD 1/26/07


CHRISTINA JOHNSON
SUPERVISORY PATENT EXAMINER

1/30/07